REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1, 12, 16, 29, 34, and 38 are amended. New claims 43 and 44 are added. Claims 30 and 35 are canceled without prejudice. Claims 1-29, 31-34, and 36-44 are pending in this application.

35 U.S.C. § 103

Claims 1-4, 6-7, 10-20, 22-23, and 26-42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,256,777 to Ackerman (hereinafter "Ackerman") in view of U.S. Patent No. 5,054,787 to Richardson (hereinafter "Richardson"). Claims 30 and 35 are canceled without prejudice, thereby rendering the rejection of claims 30 and 35 moot. Applicant respectfully submits that claims 1-4, 6-7, 10-20, 22-23, 26-29, 31-34, and 36-42 are not obvious over Ackerman in view of Richardson.

Ackerman is directed to a method and apparatus for debugging of optimized machine code, using hidden breakpoints (see, Title). As discussed in the Abstract of Ackerman, Ackerman describes a debugging method wherein a debug information file is constructed which includes information that identifies changes of variable value assignments to registers at plural steps of program. The information further includes data that identifies any change of sequence of machine code instructions from the sequence of source code instructions that gave rise to the machine code instructions. Using such information, hidden breakpoints are inserted into the machine code (wherein a hidden breakpoint enables access to an instruction to either store a variable value from an identified register or to move

to a machine code instruction that corresponds in order to a source code instruction that gave rise to the machine code instruction). Thereafter, the program is executed under control of a debug program and, upon encountering a hidden breakpoint, automatically either stores the variable value that exists in the identified register or moves to execute a machine code instruction that is indicated by the hidden breakpoint. The actions carried out in response to encountering the hidden breakpoint are invisible to the user.

Richardson is directed to a portable validation unit for an electronic gaming system, particularly a BINGO system (see, Abstract). A 33-byte EBC record, as well as a check byte, is transferred from an electronic handset to a validation unit (see, col. 6, lines 3-6, and col. 17, lines 37-39 and 56-57). The EBC record includes various data, such as a card number, pattern number, game number, and level number (see Fig. 2D). The check byte is matched with a checksum in a register which has been accumulating a summation of all the 33 input bytes (see, col. 17, lines 60-63). The result should be zero, if the check byte is to match the checksum (see, col. 17, lines 63-65). If the result is not zero, indicating an error, the communications routine is repeated (see, col. 17, lines 65-68).

In contrast, amended claim 1 recites in part:

> identifying a plurality of key instructions in a function;
> inserting into the function, for each of the plurality of key instructions, an extra instruction that modifies a register based at least in part on the corresponding key instruction;
> identifying a set of inputs to the function; and
> determining a checksum for the function based at least in part on modifications made to the register by the extra instructions when the function is executed with the set of inputs.

Applicant respectfully submits that Ackerman in view of Richardson does not disclose determining a checksum as recited in amended claim 1.

Richardson, as discussed above, describes a checksum in a register which has been accumulating a summation of all the 33 input bytes in the 33-byte EBC record. However, this checksum in Richardson is a summation of the received input bytes, not a checksum generated based on modifications made to a register by certain instructions when a function is executed. Nowhere in Richardson is there any discussion or mention of determining a checksum based at least in part on modifications made to a register by extra instructions when a function is executed with a set of inputs as recited in amended claim 1. As such, Applicant respectfully submits that Richardson does not disclose or suggest determining a checksum for the function based at least in part on modifications made to the register by the extra instructions when the function is executed with the set of inputs as recited in amended claim 1.

Ackerman is not cited as disclosing determining a checksum, and Applicant respectfully submits that Ackerman does not disclose or suggest determining a checksum as recited in amended claim 1.

As neither Ackerman nor Richardson discloses or suggests determining a checksum as recited in amended claim 1, Applicant respectfully submits that the combination of Ackerman and Richardson does not disclose or suggest determining a checksum as recited in amended claim 1. For at least these reasons, Applicant respectfully submits that amended claim 1 is allowable over Ackerman in view of Richardson.

Given that claims 2-4, 6-7, 10-11, and 41 depend from amended claim 1, Applicant respectfully submits that claims 2-4, 6-7, 10-11, and 41 are likewise allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 1.

With respect to amended claim 12, amended claim 12 recites in part:

> generating a checksum on bytes of a digital good based on modifications made by the digital good rather than on reading the bytes.

Applicant respectfully submits that Ackerman in view of Richardson does not disclose or suggest generating a checksum on bytes of a digital good based on changes made by the digital good rather than on reading the bytes as recited in amended claim 12.

Richardson, as discussed above, describes a checksum in a register which has been accumulating a summation of all the 33 input bytes in the 33-byte EBC record. However, this checksum in Richardson is a summation of the received input bytes, not a checksum based on modifications made by a digital good. Nowhere in Richardson is there any discussion or mention of generating a checksum on bytes of a digital good based on modifications made by the digital good rather than on reading the bytes as recited in amended claim 12. As such, Applicant respectfully submits that Richardson does not disclose or suggest generating a checksum on bytes of a digital good based on modifications made by the digital good rather than on reading the bytes as recited in amended claim 12.

Ackerman is not cited as disclosing determining a checksum, and Applicant respectfully submits that Ackerman does not disclose or suggest generating a checksum as recited in amended claim 12.

As neither Ackerman nor Richardson discloses or suggests generating a checksum as recited in amended claim 12, Applicant respectfully submits that the combination of Ackerman and Richardson does not disclose or suggest generating a checksum as recited in amended claim 12. For at least these reasons, Applicant respectfully submits that amended claim 12 is allowable over Ackerman in view of Richardson.

Given that claims 13-15 depend from amended claim 12, Applicant respectfully submits that claims 13-15 are likewise allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 12.

With respect to amended claim 16, Applicant respectfully submits that, similar to the discussion above regarding amended claim 1, Ackerman in view of Richardson does not disclose or suggest determining a checksum value for the segment based at least in part on modifications made to the register by the plurality of instructions when the plurality of instructions are executed with the set of inputs to the segment as recited in amended claim 16. For at least these reasons, Applicant respectfully submits that amended claim 16 is allowable over Ackerman in view of Richardson.

Given that claims 17-20, 22-23, 26-28, and 42 depend from amended claim 16, Applicant respectfully submits that claims 17-20, 22-23, 26-28, and 42 are likewise allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 16.

With respect to amended claim 29, Applicant respectfully submits that, similar to the discussion above regarding amended claim 1, Ackerman in view of

Richardson does not disclose or suggest determining a checksum value for the segment based at least in part on modifications made to the register by the plurality of instructions when the segment is executed with the set of inputs as recited in amended claim 29. For at least these reasons, Applicant respectfully submits that amended claim 29 is allowable over Ackerman in view of Richardson.

Given that claims 31-33 depend from amended claim 29, Applicant respectfully submits that claims 31-33 are likewise allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 29.

With respect to amended claim 34, Applicant respectfully submits that, similar to the discussion above regarding amended claim 1, Ackerman in view of Richardson does not disclose or suggest determining a checksum value for the segment based at least in part on modifications made to the register by the plurality of instructions when the segment is executed with the set of inputs as recited in amended claim 34. For at least these reasons, Applicant respectfully submits that amended claim 34 is allowable over Ackerman in view of Richardson.

Given that claims 36-37 depend from amended claim 34, Applicant respectfully submits that claims 36-37 are likewise allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 34.

With respect to amended claim 38, Applicant respectfully submits that, similar to the discussion above regarding amended claim 1, Ackerman in view of

Richardson does not disclose or suggest generating a checksum value for a segment of a digital good based at least in part on both a set of inputs to the segment and the content of a register that results from applying the set of inputs to the segment and modification of the register by instructions in the segment as recited in amended claim 38. For at least these reasons, Applicant respectfully submits that amended claim 38 is allowable over Ackerman in view of Richardson.

Given that claims 39-40 depend from amended claim 38, Applicant respectfully submits that claims 39-40 are likewise allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 38.

Claims 5 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ackerman in view of Richardson in further view of U.S. Patent No. 5,809,306 to Suzuki et al. (hereinafter "Suzuki"). Applicant respectfully submits that claims 5 and 21 are not obvious over Ackerman and Richardson in further view of Suzuki.

With respect to claim 5, claim 5 depends from amended claim 1 and Applicant respectfully submits that claim 5 is allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 1. Furthermore, Applicant respectfully submits that Suzuki is not cited as curing, and does not cure, the deficiencies of Ackerman in view of Richardson discussed above with respect to amended claim 1. For at least these reasons, Applicant respectfully submits that claim 5 is allowable over Ackerman in view of Richardson and Suzuki.

With respect to claim 21, claim 21 depends from amended claim 16 and Applicant respectfully submits that claim 21 is allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 16. Furthermore, Applicant respectfully submits that Suzuki is not cited as curing, and does not cure, the deficiencies of Ackerman in view of Richardson discussed above with respect to amended claim 16. Thus, for at least these reasons, Applicant respectfully submits that claim 21 is allowable over Ackerman in view of Richardson and Suzuki.

Claims 8-9 and 24-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ackerman in view of Richardson in further view of U.S. Patent No. 6,085,029 to Kolawa et al. (hereinafter "Kolawa"). Applicant respectfully submits that claims 8-9 and 24-25 are not obvious over Ackerman and Richardson in further view of Kolawa.

With respect to claims 8 and 9, claims 8 and 9 depend from amended claim 1 and Applicant respectfully submits that claims 8 and 9 are allowable over Ackerman in view of Richardson for at least the reasons discussed above with respect to amended claim 1. Furthermore, Applicant respectfully submits that Kolawa is not cited as curing, and does not cure, the deficiencies of Ackerman in view of Richardson discussed above with respect to amended claim 1. Thus, for at least these reasons, Applicant respectfully submits that claims 8 and 9 are allowable over Ackerman in view of Richardson and Kolawa.

With respect to claims 24 and 25, claims 24 and 25 depend from amended claim 16 and Applicant respectfully submits that claims 24 and 25 are allowable over Ackerman in view of Richardson for at least the reasons discussed above

with respect to amended claim 16. Furthermore, Applicant respectfully submits that Kolawa is not cited as curing, and does not cure, the deficiencies of Ackerman in view of Richardson discussed above with respect to amended claim 16. Thus, for at least these reasons, Applicant respectfully submits that claims 24 and 25 are allowable over Ackerman in view of Richardson and Kolawa.

Applicant respectfully requests that the §103 rejections be withdrawn.

New Claims

New claims 43 and 44 are added.

With respect to new claim 43, new claim 43 depends from amended claim 1 and Applicant respectfully submits that new claim 43 is allowable over the cited references at least because of its dependency on amended claim 1. Furthermore, Applicant respectfully submits that the cited references do not disclose or suggest one or more computer readable media as recited in claim 1, the acts further including repeating execution of the function with a different input of the set of inputs until the function has been executed with each input of the set of inputs as recited in new claim 43. For at least these reasons, Applicant respectfully submits that new claim 43 is allowable over the cited references.

With respect to new claim 44, new claim 44 depends from amended claim 16 and Applicant respectfully submits that new claim 44 is allowable over the cited references at least because of its dependency on amended claim 16. Furthermore, Applicant respectfully submits that the cited references do not disclose or suggest a method as recited in claim 16, further comprising executing the segment a plurality of times, each execution using a different input of the set of
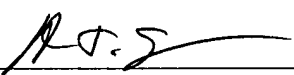
inputs as recited in new claim 44. For at least these reasons, Applicant respectfully submits that new claim 44 is allowable over the cited references.

Conclusion

Claims 1-29, 31-34, and 36-44 are in condition for allowance. Applicant respectfully requests reconsideration and issuance of the subject application. Should any matter in this case remain unresolved, the undersigned attorney respectfully requests a telephone conference with the Examiner to resolve any such outstanding matter.

Respectfully Submitted,

Date: _3/21/05_

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